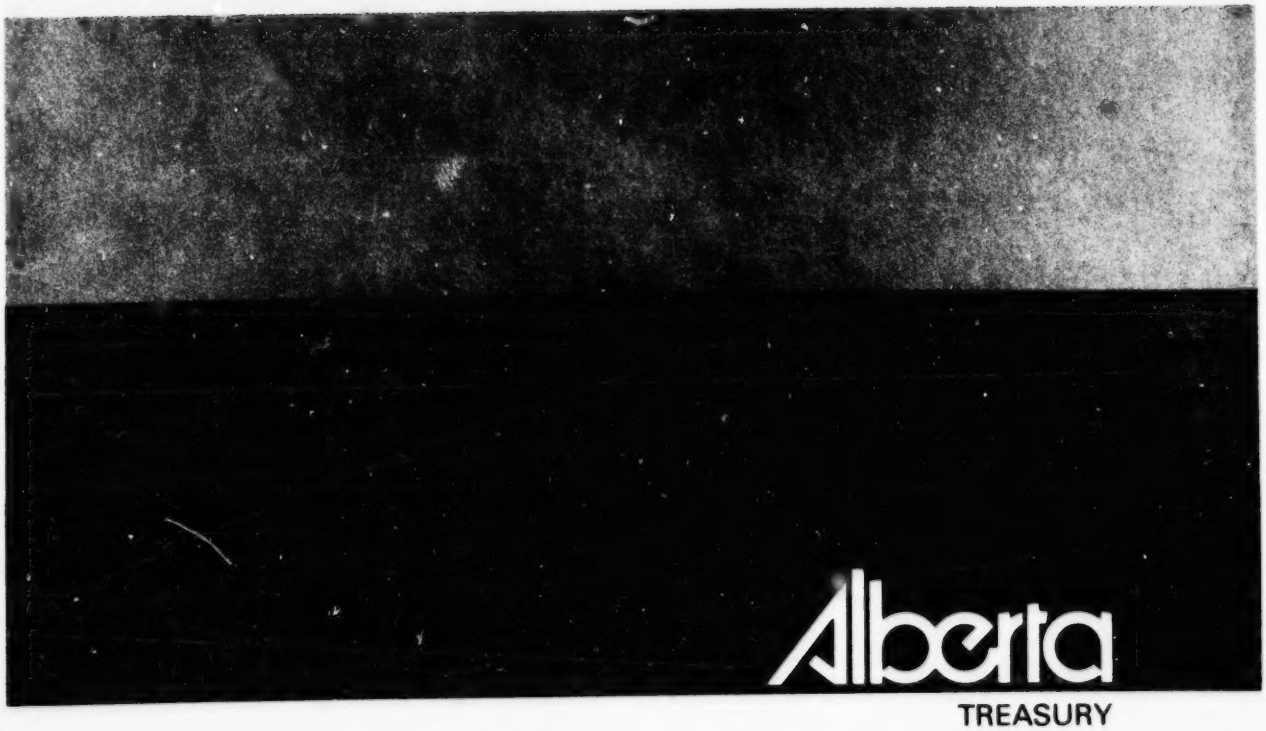

TREASURY
Bureau of Statistics

ALBERTA CENSUS DIVISION
POPULATION PROJECTIONS UPDATE
1984 - 1998

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HIGHLIGHTS

Three revised series of population projections for Alberta were released by the Bureau in May-84, based on lower migration expectations. These three - Series A, B and C - are produced at the census division level in this report. Population growth for Alberta's census divisions is projected to increase at lower annual growth rates for the next fifteen years than in the past decade due to lower migration assumptions. These declines in growth are particularly evident during 1983-86 when assumed migration loss dampens the positive effect of natural increase on population growth. After 1986, net migration is assumed to increase steadily and becomes a significant factor in population growth. The new series show that from 1983 to 1998 the highest annual growth rates are expected to occur in two resource-based regions - Census Division 12 (containing Fort McMurray) and 14 (containing Hinton). As one would expect given their predominant sizes, the largest absolute population gains are projected to occur in Census Divisions 6 and 11 (containing Calgary and Edmonton respectively).

More specifically:

- Over the entire projection period, annual growth rates of about 2.4% and 2.0% are projected for Census Divisions 12 and 14. In terms of growth rates these are followed by four census divisions clustered at or slightly above, the provincial average growth rate of 1.5%. These include C.D. 6 and 11 (reflecting the attraction of the two major urban centres to migrants), C.D. 8 (Red Deer) reflecting impacts associated with resource processing, and C.D. 3 (Pincher Creek) the area with the province's highest fertility rate. Although no census division is expected to lose population, there are three - C.D.'s 5, 7 and 9 - with annual growth rates less than 1%. Slow growth in the first two (Drumheller and Stettler) is the result of out-migration while the third (Banff) is a result of the lowest fertility rate in the province.

- In terms of absolute growth Census Divisions 6 and 11 will continue to receive a large share of the provincial population growth. By 1998, the

projected population for Census Division 6 is expected to reach between 865,000 and 905,100, while for Census Division 11, population should be between 982,100 and 1,018,100. Following Census Divisions 6 and 11, divisions 15, 12 and 8 which contain the urban centres of Grande Prairie, Fort McMurray and Red Deer respectively, are the next in rank in terms of absolute population growth. These five census divisions together will capture nearly 85% of Alberta's population growth.

- The two phases of the overall projection period show some important differences. The 1983-86 period will be characterized by low growth for all census divisions, and with the continued negative impact of migration, the major contributing factor to population growth will be natural increase. In this environment, the two major urban census divisions will receive a much lower share (in the 20-55% range) of provincial growth than has been the case historically. At the same time C.D. 2 (Lethbridge), 8 (Red Deer), 12 (Fort McMurray) and 15 (Grande Prairie) will each receive more than 5% of the provincial growth. The 1986-98 period will have higher growth across all census divisions as a result of the return to positive migration. As well, C.D. 6 and 11 will capture something close to their traditional share of growth at around 70%. Of the other census divisions, only C.D.'s 12 and 8 will receive more than 5% of growth over this portion of the projection period.

INTRODUCTION

This report presents updated population projections for Alberta census divisions for the period 1-Jun-84 to 1-Jun-98. These projections are a result of input from the interdepartmental Sub-committee on Population Projections whose contribution is gratefully acknowledged.

Three projection series, Series A, B, and C, were produced using revised assumptions to reflect recent changes in migration and fertility that had occurred in Alberta since the publication of the previous projection series, Series 1, 5 and 9 in Sep-83.[1] The new series correspond to the series published in the report Alberta Population Projections Update, 1984-2011 which was released in May-84.

The updated series are supplements to the previous series and differ from the latter mainly due to the following:

(1) Base population figures used in the updated series, Series A, B and C are the 1983 population estimates for census divisions, whereas the base population data used in Series 1, 5 and 9 are the 1981 Census population counts for census divisions.

(2) Total fertility rates are assumed to be constant at 1983 levels throughout the projection period. The previous series employed three assumptions, low, medium and high, with the medium assumption using constant 1981 total fertility rates.

(3) Like Series 1, 5 and 9, each updated series uses a different migration assumption. However, these assumptions have been revised and lowered

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[1] See Alberta Bureau of Statistics, 1983. Alberta Census Division Population Projections, 1982-1996

considerably on the provincial level for the period 1984 to 1986, reflecting recent declines in net migration. In the long run, migration is projected to regain momentum similar to the low migration assumptions used in Series 1 of the previous series.

(4) The proportional distributions of net migration among census divisions from 1984-86 are assumed to resemble 1983-84 levels. These are the latest distributions of migration loss available and are considered appropriate for use as assumptions for the short term. From 1986 to 1998 net migration distributions are assumed to be constant at a pattern similar to that occurring between 1976 and 1981 with some adjustments. These adjustments are necessary to eliminate the threshold effects of many census divisions whose economic bases have changed substantially since the late 70's and to allow for possible resource developments that might take place in the province in the future. Distributions of migration from earlier periods, 1966-76 and 1971-81, are not used in these series because they did not seem to apply as well when Alberta's migration levels fell recently. Furthermore, there is a belief that, although Alberta may grow at a slower rate (net migration in the 1,000 - 26,000 range instead of the 46,000 - 62,000 range of the late 70's) this growth will be driven by many of the same factors - such as primary resource developments and processing - as in the boom period, and that the associated population growth also may be distributed in a similar fashion as previously.

This report contains a brief description of methodology, the projection assumptions and results. Population projection details by age and sex are not included in the report but are available upon request. Requests or inquiries regarding the methodology and other related information should be directed to Information Services, Alberta Bureau of Statistics. These population projections are also computer-accessible on ASIST (Alberta Statistical Information System) matrices 6129 and 6132.

METHODOLOGY

The population projections are prepared using a cohort survival model. The base population figures used are the 1983 census division population estimates. The projection of each of the components of growth - births, deaths and migration - is possible with a set of pre-determined assumptions. The basic procedures of the model include the addition of births, subtraction of deaths and the addition of net migration to the base population. This process is iterated for fifteen successive years to the end of the projection period in 1998. While the projections are initially computed for each census division separately, they are later adjusted to be consistent with the results of the provincial projection totals for Series A, B and C as published in the report Alberta Population Projections Update, 1984-2011.

ASSUMPTIONS

Fertility, mortality and migration assumptions are employed to derive projected births, deaths and net migration for census divisions. The assumptions differ from one census division to another reflecting regional characteristics. However, these are consistent with the assumptions used for the provincial population projections.

In all three series, one set of fertility assumptions is used to project births. The latest available (1983) total fertility rates by census divisions are assumed to be constant throughout the projection period. In most census divisions, the 1983 total fertility rates have increased slightly since 1981, a finding consistent with fertility increases at the provincial level. The 1983 census division fertility rates range from 1471.9 per thousand women aged 15-49 for Census Division 9 to 2822.5 per thousand women aged 15-49 for Census Division 3 (Table 4).

One set of mortality assumptions is also used in the three series. It involves the use of life table survival ratios to project cohort survival.

The census divisions are grouped into three regions, the southern group (CDs 1, 2, 3, 4, 5, 7, 8 and 9), the metropolitan group (CDs 6 and 11) and the northern group (CDs 10, 12, 13, 14 and 15). Survival ratios are computed for each of these regions using 1981 death statistics and census population counts. Since mortality behaviour has changed little in the past years, the 1981 survival ratios are used in the population projections model. These are assumed to be constant throughout the projection period (Table 5).

Three different migration assumptions are used to project net migration in the three series (Table 6). At the provincial level, the assumptions are low for Series A, medium for Series B and high for Series C. However, for the census division level, net migration assumptions may depart from the low, medium and high provincial norm. This is because the ability of census divisions to absorb or attract migrants differs and depends on the size of the economic base relative to others. Both recent and historical distributions of migrants by census division have been studied and incorporated into the population projections. For the short term, the proportional distribution of net migration among census divisions is based on research on the 1983-84 migration trend. A residual approach involving the use of vital statistics and the analysis of growth distributions from health care registration files is used to derive the 1983-84 proportional distribution of net migration by census division. These distributions are assumed to be constant from 1984-86. For the period 1986 to 1998, when net migration is projected to be positive at the provincial level, the proportional distribution of net migration estimated for the period 1976-81 has been adjusted to reflect recent changes and used in the projections. These proportional distributions are the same for all three series and the assumed migration levels for the census divisions are presented in Table 7.

The age and sex structure of migrants by census division is assumed to be the same as that estimated for the 1976-81 period using a technique employing life table survival ratios and census survival ratios. Adjustments have been made to smooth out negative influences on the final projection results.

TABLE 1
ESTIMATED AND PROJECTED POPULATION AND GROWTH RATES BY CENSUS DIVISION, ALBERTA
1983 AND 1998[1]

Census Division[2]	1983 Estimated Population	1998[3] Projected Population Series A	Series B	Series C
1 (Medicine Hat)	58,000	69,500	70,600	71,100
		(1.2%)	(1.3%)	(1.4%)
2 (Lethbridge)	116,900	138,400	139,600	140,200
		(1.1%)	(1.2%)	(1.2%)
3 (Pincher Creek)	37,800	46,900	47,100	47,100
		(1.5%)	(1.5%)	(1.5%)
4 (Hanna)	12,600	14,500	14,300	14,200
		(1.0%)	(0.9%)	(0.8%)
5 (Drumheller)	40,500	46,300	46,300	46,300
		(0.9%)	(0.9%)	(0.9%)
6 (Calgary)	702,500	865,000	890,000	905,100
		(1.4%)	(1.6%)	(1.7%)
7 (Stettler)	42,200	47,900	47,800	47,700
		(0.9%)	(0.8%)	(0.8%)
8 (Red Deer)	132,500	167,100	168,900	169,800
		(1.6%)	(1.6%)	(1.7%)
9 (Banff)	23,600	26,300	26,600	26,800
		(0.7%)	(0.8%)	(0.9%)
10 (Camrose)	81,700	93,900	95,300	95,700
		(0.9%)	(1.0%)	(1.1%)
11 (Edmonton)	804,100	982,100	1,004,200	1,018,100
		(1.3%)	(1.5%)	(1.6%)
12 (Fort McMurray)	90,300	127,900	129,700	130,500
		(2.4%)	(2.4%)	(2.5%)
13 (Whitecourt)	55,900	66,100	66,700	66,900
		(1.1%)	(1.2%)	(1.2%)
14 (Hinton)	26,800	35,800	36,600	36,900
		(1.9%)	(2.1%)	(2.2%)
15 (Grande Prairie)	136,900	163,900	164,300	165,000
		(1.2%)	(1.2%)	(1.3%)
Alberta	2,362,300	2,891,100	2,947,400	2,981,300
		(1.4%)	(1.5%)	(1.6%)

Note: [1] Data may not add to provincial totals due to rounding.
[2] Major centres within the census divisions are in parentheses.
[3] Compound annual growth rates from 1983 to 1998 are in parentheses.

Prepared by Alberta Bureau of Statistics September 1984

TABLE 7

SUMMARY TABLE
POPULATION PROJECTIONS FOR CENSUS DIVISIONS, ALBERTA, 1984-1998
BOTH SEXES
(IN THOUSANDS)

- PROJECTION SERIES A -

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	58.1	58.4	58.9	59.5	60.3	61.2	62.1	63.0	63.8	64.8	65.7	66.6	67.5	68.5	69.5
2	117.9	118.9	120.1	121.4	122.9	124.5	126.1	127.6	129.2	130.7	132.3	133.8	135.4	136.9	138.4
3	38.3	38.6	39.0	40.1	40.7	41.3	41.8	42.5	43.1	43.7	44.4	45.0	45.6	46.2	46.9
4	12.7	12.9	13.1	13.2	13.4	13.6	13.7	13.8	14.0	14.1	14.2	14.3	14.4	14.6	14.5
5	40.9	41.3	41.7	42.2	42.5	43.0	43.4	43.8	44.1	44.5	44.9	45.2	45.6	45.9	46.3
6	697.3	696.6	702.6	712.0	723.8	736.7	749.5	762.4	776.2	790.3	804.9	818.0	833.8	849.2	865.0
7	42.5	42.9	43.4	43.9	44.4	44.8	45.2	45.6	46.0	46.4	46.7	47.1	47.4	47.7	47.9
8	134.3	136.1	137.9	139.9	142.2	144.6	146.9	149.3	151.8	154.2	156.7	159.2	161.8	164.5	167.1
9	23.6	23.7	23.9	24.2	24.5	24.7	24.9	25.1	25.3	25.5	25.7	25.9	26.0	26.2	26.3
10	82.1	82.3	82.6	83.0	83.7	84.5	85.4	86.2	87.1	88.1	89.2	90.3	91.4	92.6	93.9
11	801.4	802.9	810.7	821.8	834.7	848.6	862.5	876.5	890.9	905.6	920.3	935.2	950.5	966.2	982.1
12	92.1	93.9	95.5	97.3	99.4	101.9	104.3	106.9	109.7	112.5	115.4	118.4	121.5	124.6	127.9
13	56.4	56.9	57.5	58.1	58.7	59.4	60.1	60.9	61.6	62.3	63.1	63.8	64.6	65.4	66.1
14	27.0	27.2	27.4	27.6	28.1	28.6	29.2	29.9	30.5	31.2	31.9	32.7	33.4	34.1	34.9
15	137.8	139.2	141.3	143.6	145.8	147.8	149.8	151.8	153.7	155.5	157.3	159.1	160.7	162.3	163.9
ALBERTA	2362.0	2371.8	2396.0	2427.6	2465.0	2505.4	2545.3	2585.5	2627.3	2669.8	2712.4	2755.5	2799.8	2845.1	2891.1

- PROJECTION SERIES B -

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	58.2	58.7	59.3	60.0	60.9	61.8	62.8	63.7	64.6	65.5	66.5	67.5	68.6	69.6	70.6
2	117.9	119.1	120.4	121.9	123.5	125.1	126.7	128.3	129.9	131.5	133.1	134.7	136.3	138.0	139.6
3	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.8	44.4	45.1	45.7	46.4	47.1
4	12.7	12.9	13.1	13.2	13.4	13.5	13.7	13.8	13.9	14.1	14.1	14.2	14.2	14.3	14.3
5	40.9	41.4	41.8	42.2	42.6	43.0	43.4	43.8	44.2	44.6	44.9	45.3	45.6	46.0	46.3
6	699.8	703.4	711.5	722.8	736.0	749.8	763.9	778.4	793.2	808.4	823.8	839.7	856.1	873.1	890.0
7	42.6	43.1	43.5	44.0	44.4	44.9	45.3	45.7	46.0	46.4	46.8	47.1	47.4	47.6	47.8
8	134.3	136.2	138.1	140.3	142.7	145.2	147.7	150.2	152.8	155.3	158.0	160.6	163.3	166.1	168.9
9	23.7	23.9	24.1	24.4	24.7	24.9	25.1	25.4	25.6	25.8	26.0	26.1	26.3	26.5	26.6
10	82.0	82.4	82.7	83.3	84.1	85.0	85.9	86.9	87.9	88.9	90.1	91.3	92.6	93.9	95.3
11	803.7	809.3	819.0	831.7	845.9	860.6	875.5	890.8	906.2	921.8	937.6	953.8	970.4	987.4	1004.2
12	92.1	93.8	95.5	97.5	99.8	102.3	105.0	107.7	110.5	113.4	116.5	119.7	123.0	126.3	129.7
13	56.4	57.0	57.6	58.2	58.9	59.6	60.3	61.1	61.9	62.6	63.4	64.2	65.0	65.8	66.7
14	27.0	27.3	27.9	28.4	29.0	29.6	30.3	31.1	31.8	32.5	33.3	34.0	34.9	35.8	36.6
15	138.1	139.9	142.2	144.5	146.6	148.7	150.7	152.6	154.5	156.2	158.0	159.7	161.3	162.8	164.3
ALBERTA	2367.4	2386.8	2415.8	2451.9	2492.0	2535.0	2578.0	2621.5	2665.7	2710.5	2756.1	2802.7	2850.3	2899.0	2947.4

- PROJECTION SERIES C -

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	58.2	58.9	59.5	60.3	61.3	62.2	63.2	64.2	65.1	66.0	67.0	68.0	69.0	70.1	71.1
2	117.9	119.3	120.6	122.2	123.8	125.5	127.1	128.7	130.2	131.9	133.5	135.1	136.8	138.5	140.2
3	38.4	39.0	39.6	40.1	40.7	41.3	42.0	42.6	43.2	43.8	44.4	45.1	45.8	46.4	47.1
4	12.7	12.9	13.1	13.2	13.4	13.5	13.7	13.8	13.9	14.0	14.1	14.2	14.2	14.2	14.2
5	40.9	41.4	41.8	42.3	42.6	43.0	43.5	43.8	44.2	44.6	45.0	45.3	45.7	46.0	46.3
6	701.5	708.5	719.2	731.6	745.8	760.1	774.8	789.8	805.2	820.9	836.9	853.3	870.2	887.5	905.1
7	42.6	43.1	43.5	44.0	44.4	44.9	45.3	45.7	46.1	46.4	46.7	47.1	47.3	47.5	47.7
8	134.4	136.3	138.2	140.6	143.1	145.6	148.2	150.7	153.3	156.0	158.6	161.3	164.1	166.9	169.8
9	23.8	24.0	24.3	24.6	24.8	25.0	25.3	25.6	25.8	26.0	26.2	26.3	26.5	26.7	26.8
10	82.0	82.4	82.7	83.4	84.3	85.2	86.1	87.1	88.2	89.2	90.4	91.7	93.0	94.4	95.7
11	805.3	814.4	824.2	835.8	855.0	870.2	885.6	901.3	917.3	933.3	949.7	966.3	983.3	1000.6	1018.1
12	92.1	93.8	95.5	97.5	100.0	102.6	105.3	108.1	110.9	113.9	117.0	120.2	123.5	126.9	130.5
13	56.5	57.1	57.7	58.3	59.0	59.8	60.5	61.3	62.1	62.8	63.6	64.4	65.2	66.1	66.9
14	27.1	27.5	28.0	28.6	29.2	29.9	30.6	31.3	32.0	32.8	33.6	34.4	35.2	36.1	36.9
15	138.2	140.4	142.9	145.2	147.3	149.4	151.4	153.2	155.1	156.9	158.6	160.3	161.9	163.5	165.0
ALBERTA	2371.3	2398.8	2432.1	2471.3	2514.4	2557.5	2602.0	2646.8	2692.2	2738.2	2785.1	2832.8	2881.5	2931.1	2981.3

NOTE: 1. DATA MAY NOT ADD TO PROVINCIAL TOTALS DUE TO ROUNDING.
2. THE REFERENCE DATE IS JUNE 1 OF EACH YEAR.

PREPARED BY ALBERTA BUREAU OF STATISTICS

SEPTEMBER, 1984

TABLE 1

PROJECTED ANNUAL POPULATION GROWTH RATES FOR CENSUS DIVISIONS, ALBERTA, 1984-1999
(IN PERCENT)

- PROJECTION SERIES A -

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	.35	.52	.86	1.02	1.34	1.49	1.47	1.45	1.27	1.57	1.29	1.17	1.25	1.48	1.49
2	.84	.85	1.01	1.08	1.28	1.36	1.20	1.19	1.25	1.16	1.22	1.13	1.26	1.19	1.10
3	1.32	1.51	1.55	1.78	1.50	1.47	1.21	1.47	1.41	1.35	1.46	1.35	1.33	1.32	1.52
4	.79	1.57	1.55	.76	1.52	1.49	.74	.71	1.45	.71	.91	.76	.75	.00	.00
5	.99	.98	.97	1.20	.71	1.10	.93	.92	.68	.97	.90	.67	.89	.88	.87
6	-.74	-.10	.86	1.14	1.06	1.78	1.74	1.75	1.78	1.63	1.78	1.75	1.83	1.85	1.86
7	.71	.94	1.17	1.15	1.14	.90	.89	.80	.80	.87	.85	.86	.84	.82	.82
8	1.36	1.34	1.32	1.45	1.64	1.69	1.59	1.61	1.67	1.58	1.62	1.60	1.63	1.67	1.58
9	.00	.62	.89	1.26	1.24	.82	.81	.80	.80	.79	.78	.78	.69	.77	.78
10	.85	.24	.38	.68	.84	.96	1.07	.94	1.04	1.15	1.21	1.23	1.22	1.21	1.40
11	-.24	.79	.97	1.37	1.57	1.67	1.68	1.62	1.64	1.65	1.62	1.62	1.64	1.65	1.65
12	1.99	1.95	1.70	1.88	2.16	2.52	2.36	2.49	2.82	2.55	2.58	2.60	2.62	2.55	2.85
13	.71	.89	1.05	1.04	1.03	1.19	1.18	1.33	1.15	1.14	1.28	1.11	1.25	1.24	1.07
14	.75	.74	1.47	1.81	1.78	2.10	2.40	2.01	2.30	2.25	2.51	2.34	2.35	2.25	2.39
15	.66	1.02	1.51	1.62	1.53	1.37	1.35	1.34	1.25	1.17	1.16	1.14	1.07	1.00	.99
ALBERTA	-.01	.41	1.02	1.32	1.54	1.64	1.59	1.60	1.60	1.62	1.60	1.59	1.61	1.62	1.62

- PROJECTION SERIES B -

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	.52	.68	1.02	1.18	1.50	1.48	1.62	1.43	1.41	1.39	1.33	1.56	1.63	1.46	1.48
2	.86	1.02	1.09	1.25	1.31	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.19	1.25	1.16
3	1.32	1.57	1.54	1.52	1.50	1.47	1.45	1.43	1.41	1.42	1.37	1.56	1.33	1.53	1.51
4	.79	1.57	1.55	.76	1.52	.75	1.48	.73	.72	1.44	.00	.71	.00	.70	.00
5	.99	1.22	.97	.96	.95	.94	.93	.92	.91	.94	.87	.89	.88	.89	.83
6	-.38	.51	1.15	1.59	1.83	1.80	1.88	1.96	1.98	1.92	1.90	1.92	1.95	1.99	1.94
7	.95	1.17	.93	1.15	.91	.90	1.12	.88	.86	.8	.84	.84	.84	.42	.42
8	1.36	1.41	1.40	1.59	1.71	1.73	1.72	1.69	1.71	1.64	1.74	1.65	1.68	1.77	1.69
9	.42	.84	.84	1.24	1.23	.81	.80	1.20	.79	.78	.78	.38	.77	.76	.38
10	.37	.49	.86	.73	.98	1.07	1.08	1.16	1.15	1.14	1.35	1.33	1.42	1.40	1.49
11	-.05	.70	1.20	1.55	1.79	1.76	1.93	1.75	1.73	1.72	1.71	1.73	1.76	1.75	1.70
12	1.99	1.85	1.81	2.09	2.36	2.51	2.64	2.57	2.60	2.62	2.73	2.75	2.67	2.77	2.69
13	.71	1.04	1.05	1.04	1.20	1.19	1.17	1.31	1.31	1.13	1.28	1.26	1.25	1.23	1.37
14	.75	1.11	2.20	1.79	2.11	2.07	2.36	2.64	2.25	2.26	2.46	2.10	2.65	2.58	4.23
15	.88	1.30	1.64	1.62	1.45	1.43	1.34	1.26	1.25	1.10	1.15	1.08	1.00	.93	.92
ALBERTA	.22	.62	1.22	1.44	1.67	1.69	1.70	1.69	1.69	1.68	1.69	1.70	1.71	1.67	

- PROJECTION SERIES C -

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	.52	1.20	1.02	1.34	1.66	1.47	1.61	1.58	1.40	1.38	1.52	1.55	1.47	1.35	1.47
2	.86	1.19	1.09	1.23	1.31	1.37	1.27	1.26	1.17	1.21	1.29	1.26	1.29	1.29	1.23
3	1.59	1.56	1.54	1.26	1.50	1.47	1.69	1.43	1.41	1.39	1.37	1.58	1.35	1.31	1.51
4	.79	1.57	1.55	.76	1.52	.75	1.49	.73	.72	.72	.71	.77	.00	.00	.00
5	.99	1.22	.97	1.20	.71	.94	1.16	.65	.91	.90	.90	.67	.89	.88	.85
6	-.14	1.05	1.45	1.72	1.96	1.92	1.93	1.94	1.95	1.95	1.95	1.96	1.98	1.99	1.98
7	.95	1.17	.93	1.15	.91	1.13	.89	.88	.85	.85	.85	.82	.82	.42	.42
8	1.43	1.41	1.39	1.76	1.78	1.75	1.79	1.69	1.73	1.76	1.67	1.70	1.74	1.77	1.74
9	.85	.84	1.25	1.23	.81	.81	1.20	1.19	.78	.78	.77	.38	.76	.75	.37
10	.37	.49	.86	.85	1.08	1.07	1.08	1.16	1.15	1.13	1.29	1.44	1.42	1.51	1.38
11	.15	1.13	1.48	1.65	1.81	1.78	1.97	1.77	1.76	1.74	1.75	1.76	1.78	1.76	1.75
12	1.99	1.85	1.81	2.09	2.56	2.60	2.63	2.66	2.59	2.71	2.72	2.74	2.75	2.75	2.64
13	.89	1.06	1.05	1.04	1.20	1.18	1.17	1.32	1.31	1.13	1.27	1.26	1.40	1.23	1.21
14	1.12	1.48	1.82	2.14	2.10	2.40	2.36	2.29	2.24	2.50	2.49	2.28	2.33	2.58	4.22
15	.95	1.59	1.78	1.61	1.45	1.43	1.34	1.25	1.17	1.10	1.08	1.01	1.00	.99	.92
ALBERTA	.38	1.16	1.40	1.60	1.74	1.73	1.72	1.72	1.72	1.71	1.71	1.72	1.72	1.72	1.71

YEAR HEADING REFERS TO THE TWELVE MONTH PERIOD ENDING MAY 31 OF THE SPECIFIED YEAR.

PREPARED BY ALBERTA BUREAU OF STATISTICS

SEPTEMBER, 1984

TABLE 4

AGE-SPECIFIC FERTILITY RATES FOR CENSUS DIVISIONS, ALBERTA, 1983

CENSUS DIVISIONS

AGE	1	2	3	4	5	6	7	8
15	7.13	8.52	18.18	.00	9.15	4.09	8.20	12.36
16	11.60	9.27	39.27	27.78	17.75	13.22	12.76	26.83
17	13.54	32.29	77.16	18.18	38.01	32.32	34.74	39.50
18	59.45	46.03	98.16	18.52	32.16	46.49	55.70	78.48
19	103.45	70.11	143.75	97.09	75.30	55.79	84.24	97.19
20	84.75	88.10	170.28	90.00	99.10	67.75	121.13	109.54
21	96.43	127.85	148.15	218.75	139.39	85.83	173.13	136.62
22	146.96	151.87	179.88	177.08	150.15	94.98	198.78	141.33
23	109.45	149.69	245.34	206.19	143.28	105.61	243.16	164.23
24	138.84	156.72	192.43	210.00	193.55	108.47	169.59	156.80
25	153.47	140.68	154.34	240.38	191.30	118.58	202.28	136.73
26	158.60	162.83	204.01	188.68	148.69	123.97	176.97	146.17
27	153.85	140.04	176.47	188.68	207.60	117.49	166.20	132.17
28	148.48	144.51	156.03	125.00	139.47	119.74	131.96	119.12
29	83.65	110.67	153.28	120.00	142.42	123.96	116.35	125.90
30	70.10	112.49	121.67	117.02	128.93	107.68	98.64	86.18
31	76.06	92.65	109.38	146.07	96.46	88.87	106.62	87.19
32	64.97	67.45	97.28	56.82	74.19	77.36	71.43	71.09
33	69.21	43.57	54.47	69.77	42.21	58.85	33.83	51.92
34	27.16	47.18	79.68	24.69	20.55	48.95	45.11	32.42
35	14.46	34.09	60.84	12.05	20.27	42.38	35.59	27.03
36	21.63	27.75	18.80	36.59	27.40	23.98	27.49	13.20
37	11.66	18.44	31.39	14.93	12.55	18.16	8.16	12.50
38	15.24	14.88	28.44	15.87	21.74	16.26	4.22	9.17
39	9.23	12.08	24.63	.00	4.41	8.43	12.99	9.32
40	9.38	6.21	20.83	33.90	8.89	6.72	8.97	9.54
41	3.38	3.38	.00	18.52	.00	4.13	9.85	2.96
42	3.36	8.46	11.98	.00	8.81	1.05	.00	1.48
43	3.60	3.65	6.33	.00	5.21	1.70	.00	3.16
44	3.70	3.76	.00	.00	.00	.58	.00	1.61
45	.00	.00	.00	.00	.00	.30	.00	.00
46	.00	.00	.00	.00	.00	.00	.00	.00
47	.00	.00	.00	.00	.00	.92	.00	.00
48	.00	.00	.00	.00	.00	.00	.00	.00
49	.00	.00	.00	.00	.00	.00	.00	.00
TFR	1872.79	2035.22	2822.45	2472.56	2194.94	1724.61	2363.50	2041.74

NOTE: TFR REFERS TO TOTAL FERTILITY RATE.

PREPARED BY ALBERTA BUREAU OF STATISTICS

SEPTEMBER, 1984

TABLE 4 (CONTD)

AGE-SPECIFIC FERTILITY RATES FOR CENSUS DIVISIONS, ALBERTA, 1983

	CENSUS DIVISIONS						
AGE	9	10	11	12	13	14	15
15	14.39	3.32	5.67	13.11	12.32	8.77	8.98
16	35.71	9.87	17.85	36.47	33.20	16.88	40.36
17	38.22	29.65	33.39	65.80	65.76	20.75	60.34
18	36.08	25.89	55.02	86.31	87.15	81.30	98.68
19	50.21	56.63	68.90	106.41	98.53	146.38	127.71
20	76.66	83.20	82.19	133.81	148.07	130.83	156.99
21	90.36	118.64	91.10	150.27	152.81	139.53	155.18
22	65.40	110.94	101.75	143.61	187.21	161.65	171.35
23	77.96	137.31	114.75	175.62	168.56	188.89	181.31
24	106.15	136.64	118.96	167.01	153.67	196.36	170.15
25	115.61	134.04	130.82	154.31	178.02	157.71	153.31
26	101.54	129.23	133.81	147.39	184.62	157.71	149.65
27	59.02	111.11	132.28	140.19	160.79	140.79	139.96
28	76.92	122.61	123.63	141.16	121.35	122.68	128.89
29	112.36	109.68	119.33	100.91	116.01	73.36	92.00
30	86.72	69.77	113.81	88.59	84.75	97.96	109.48
31	45.66	84.60	93.24	85.27	70.18	55.32	83.10
32	87.38	63.76	77.45	49.07	50.00	43.10	60.00
33	57.89	38.59	61.74	79.84	40.71	53.57	53.87
34	45.98	26.13	43.83	52.04	63.66	33.45	39.13
35	41.67	15.23	36.96	31.55	10.42	43.27	32.89
36	6.37	21.92	27.77	22.04	7.85	24.63	26.78
37	16.39	18.33	21.92	20.17	19.05	24.54	12.64
38	17.70	8.26	16.13	14.26	3.27	19.23	21.19
39	.00	6.54	10.39	9.24	13.03	13.07	16.19
40	9.52	2.23	6.84	13.57	9.80	6.67	11.08
41	.00	12.20	4.12	8.64	3.47	7.30	4.52
42	.00	2.44	1.39	6.65	.00	7.30	15.11
43	.00	.00	2.74	4.87	.00	.00	8.21
44	.00	.00	.51	.00	.00	.00	1.72
45	.00	.00	.00	.00	.00	.00	.00
46	.00	.00	.27	.00	.00	.00	.00
47	.00	.00	.27	.00	.00	.00	.00
48	.00	.00	.28	.00	.00	.00	.00
49	.00	.00	.00	.00	.00	.00	.00
TFR	1471.87	1684.76	1849.11	2250.50	2204.26	2172.60	2330.19

NOTE: TFR REFERS TO TOTAL FERTILITY RATE.

PREPARED BY ALBERTA BUREAU OF STATISTICS

SEPTEMBER, 1984

TABLE 5

MORTALITY ASSUMPTIONS, 1983 - 1998

- 1981 LIFE TABLE SURVIVAL RATIOS BY ALBERTA CENSUS DIVISION GROUPS -

AGE	CD GROUP 1		CD GROUP 2		CD GROUP 3	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
0	.988401	.991316	.986857	.989861	.988417	.990345
1	.995730	.991239	.995500	.999641	.988281	.999159
2	.998735	.999457	.999563	.999721	.999173	.998858
3	.999739	.999718	.999729	.999618	.999190	.999408
4	.999194	.999720	.999370	.999533	.999721	.999130
5	.999734	.999448	.999910	.999617	.999457	.999700
6	.999458	.999824	.999529	.999705	.999123	.999702
7	.999723	.999117	.999608	.999898	.999707	.999703
8	.999724	.999710	.999811	.999702	.999147	.999792
9	.999455	.999749	.999723	.999307	.999718	.999749
10	.999733	.999705	.999724	.999705	.999724	.999712
11	.998655	.999845	.999820	.999813	.998924	.999128
12	.999443	.999811	.999634	.999811	.999718	.999707
13	.999160	.999825	.999545	.999805	.998886	.999707
14	.999474	.999452	.999182	.999904	.999159	.999404
15	.999222	.998135	.998962	.999355	.998708	.999714
16	.997353	.998247	.998465	.999237	.997230	.999734
17	.994281	.998639	.998746	.999448	.996388	.998844
18	.996416	.998056	.998570	.999582	.996444	.999732
19	.996137	.999549	.998283	.999687	.996655	.999408
20	.998064	.999313	.998077	.999311	.996356	.999700
21	.996131	.999462	.998774	.999552	.997191	.998826
22	.996776	.999767	.998948	.999608	.997877	.999149
23	.998091	.999526	.998982	.999945	.996607	.999423
24	.997854	.999475	.998918	.999599	.996762	.999430
25	.997150	.999517	.998793	.999303	.997351	.999427
26	.998864	.998992	.998876	.999576	.997894	.999832
27	.998819	.999743	.998682	.999493	.999180	.999696
28	.999024	.999460	.998738	.999322	.999118	.999684
29	.998935	.998861	.998903	.999638	.999377	.998626
30	.994899	.999113	.998915	.999405	.998739	.999285
31	.998602	.998181	.998784	.999145	.997748	.998948
32	.998784	.999357	.998747	.999518	.997004	.999640
33	.997922	.999072	.998823	.998820	.999661	.998554
34	.999106	.999680	.998816	.999528	.998946	.998890
35	.997132	.998439	.998167	.999325	.998451	.999108
36	.998174	.998822	.998839	.998547	.996672	.999542
37	.996845	.998442	.998313	.998707	.999571	.999542
38	.997650	.998345	.996878	.999014	.999140	.998569
39	.997057	.996809	.998771	.998791	.997709	.998925
40	.998685	.997301	.997673	.999258	.998124	.998626
41	.997301	.999027	.997283	.997588	.998534	.999438
42	.995146	.998069	.998689	.998630	.997522	.997593
43	.996295	.997528	.995811	.998583	.997846	.997629
44	.995578	.996928	.996356	.998135	.998339	.999342
45	.994145	.997982	.997705	.997139	.996254	.999387
46	.995532	.995742	.995455	.997039	.998672	.997716
47	.995122	.997337	.995393	.998457	.995134	.998631
48	.995703	.997908	.995107	.997875	.994638	.997982
49	.992849	.995937	.994052	.995980	.996008	.995980
50	.995662	.994695	.994713	.997445	.996528	.995677
51	.996234	.998497	.993898	.997047	.991946	.996616
52	.991279	.994681	.993048	.996011	.989828	.995598
53	.991515	.995895	.991883	.995629	.990307	.996997
54	.993603	.997902	.990174	.996364	.996034	.996928
55	.995916	.995348	.991192	.994978	.989283	.993912
56	.991315	.991870	.990215	.993458	.985719	.993021
57	.992274	.993472	.989791	.995714	.987404	.992966
58	.992662	.990826	.985903	.993865	.991215	.993637
59	.988636	.993110	.987777	.993082	.985033	.996317
60	.991988	.994197	.984930	.992605	.987299	.993383
61	.986283	.993181	.982064	.992643	.985266	.995012
62	.978022	.993805	.981560	.991525	.982719	.991683
63	.977824	.986795	.982482	.992052	.988511	.984576
64	.981982	.991111	.980583	.989918	.975993	.984988
65	.977587	.987315	.974503	.990291	.978634	.986589
66	.977300	.989018	.972050	.987705	.971706	.987705
67	.971636	.989247	.968307	.985039	.978558	.986192
68	.977706	.984423	.968346	.985024	.973279	.983122
69	.960932	.982855	.975064	.971783	.966032	.980426
70	.964497	.981982	.973264	.986464	.963261	.979726
71	.952224	.974895	.955478	.984864	.954023	.973265
72	.955923	.976180	.957977	.977310	.946872	.975835
73	.953752	.974576	.948052	.978065	.961564	.977439
74	.960591	.969840	.943255	.970934	.945416	.972477
75	.937942	.970181	.940086	.965267	.945416	.972951
76	.950697	.967225	.938838	.961226	.962825	.958365
77	.929825	.970721	.940157	.963506	.933029	.962457
78	.947616	.969190	.915680	.962007	.939914	.951220
79	.922197	.952663	.913633	.959565	.945838	.948586
80	.910499	.950040	.921478	.953075	.919505	.957869
81	.918892	.938611	.899078	.955105	.909677	.961290
82	.896956	.948819	.903503	.943863	.890909	.929348
83	.885714	.939520	.884817	.922078	.914062	.944895
84	.898738	.878453	.898188	.909840	.864078	.933029
85	.870504	.923077	.878453	.915789	.877551	.938144
86	.855288	.906077	.844864	.895262	.894150	.886792
87	.857143	.887477	.822917	.871345	.855072	.896552
88	.806219	.860465	.855346	.876585	.811321	.875000
89	.843003	.834862	.828154	.869688	.869919	.851852
90+	.882979	.856287	.700195	.814965	.879550	.816284

NOTE: CD GROUP 1 REFERS TO CENSUS DIVISIONS 1,2,3,4,5,7,8 AND 9
CD GROUP 2 REFERS TO CENSUS DIVISIONS 6 AND 11
CD GROUP 3 REFERS TO CENSUS DIVISIONS 10,12,13,14 AND 15

PREPARED BY ALBERTA BUREAU OF STATISTICS

SEPTEMBER, 1984

TABLE 6

PROJECTED NET MIGRATION FOR CENSUS DIVISIONS, ALBERTA 1984-1998

SERIES A - LOW MIGRATION ASSUMPTION

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	-409	-406	-131	23	195	291	309	346	398	445	473	502	549	588	611
2	-412	-409	-131	23	195	291	309	346	398	445	473	502	549	588	611
3	-255	-170	-55	2	15	22	24	27	31	34	36	39	42	45	47
4	-44	-30	-9	-7	-60	-90	-95	-106	-122	-137	-146	-154	-169	-181	-188
5	-190	-127	-41	-	-	-	-	-	-	-	-	-	-	-	-
6	-15,035	-10,038	-3,228	383	3,195	4,771	5,069	5,666	6,518	7,285	7,753	8,222	8,989	9,628	10,011
7	-228	-152	-49	-8	-67	-101	-107	-120	-138	-154	-164	-174	-190	-203	-211
8	-303	-202	-65	48	398	594	631	705	811	906	965	1,023	1,118	1,198	1,246
9	-367	-245	-79	3	23	34	36	40	46	51	55	58	63	68	71
10	-269	-179	-58	39	323	482	512	572	658	735	783	830	907	972	1,011
11	-14,036	-5,370	-3,014	338	2,813	4,200	4,463	4,988	5,738	6,413	6,825	7,238	7,913	8,475	8,813
12	167	111	36	56	465	694	738	825	949	1,060	1,128	1,197	1,308	1,401	1,457
13	-269	-179	-58	9	75	112	119	133	153	171	182	193	211	226	235
14	-408	-272	-88	14	113	168	179	200	230	257	273	290	317	339	353
15	-1,544	-1,031	-331	-22	-180	-269	-286	-319	-367	-410	-437	-463	-506	-542	-564
ALBERTA	-34,000	-22,700	-7,300	900	7,500	11,200	11,900	13,300	15,300	17,100	18,200	19,300	21,100	22,600	23,500

SERIES B - MEDIUM MIGRATION ASSUMPTION

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	-512	-240	-57	127	265	325	364	406	447	484	530	572	614	653	653
2	-515	-241	-58	127	265	325	364	406	447	484	530	572	614	653	653
3	-214	-100	-24	10	20	25	28	31	34	37	41	44	47	50	50
4	-37	-17	-4	-39	-82	-100	-112	-125	-138	-149	-163	-176	-189	-201	-201
5	-160	-75	-18	-	-	-	-	-	-	-	-	-	-	-	-
6	-12,647	-5,925	-1,415	2,087	4,345	5,325	5,964	6,686	7,327	7,924	8,690	9,372	10,054	10,693	10,693
7	-192	-90	-21	-84	-92	-112	-126	-140	-155	-167	-184	-198	-212	-226	-226
8	-255	-119	-28	260	541	663	742	827	912	986	1,081	1,166	1,251	1,330	1,330
9	-309	-145	-35	15	31	38	42	47	52	56	61	66	71	75	75
10	-226	-106	-25	211	439	538	602	671	740	800	877	946	1,015	1,079	1,079
11	-11,806	-5,532	-1,321	1,838	3,825	4,688	5,250	5,850	6,450	6,975	7,650	8,250	8,850	9,413	9,413
12	140	66	16	304	632	775	868	967	1,066	1,153	1,265	1,364	1,463	1,556	1,556
13	-226	-106	-25	49	102	125	140	156	172	186	204	220	236	251	251
14	-343	-161	-38	74	153	188	210	234	258	279	306	330	354	377	377
15	-1,298	-608	-145	-118	-245	-300	-336	-374	-413	-448	-490	-528	-566	-602	-602
ALBERTA	-28,600	-13,400	-3,200	4,900	10,200	12,500	14,000	15,600	17,200	18,600	20,400	22,000	23,600	25,100	25,100

SERIES C - HIGH MIGRATION ASSUMPTION

C.D	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1	-442	-100	18	185	309	341	380	421	463	504	546	588	627	663	686
2	-445	-101	18	185	309	341	380	421	463	504	546	588	627	663	686
3	-185	-42	8	14	24	26	29	32	36	39	42	45	48	51	53
4	-32	-7	-1	-57	-95	-105	-117	-130	-142	-155	-168	-181	-193	-204	-211
5	-138	-31	6	-	-	-	-	-	-	-	-	-	-	-	-
6	-10,922	-2,476	442	3,025	5,069	5,581	6,220	6,901	7,583	8,264	8,946	9,628	10,267	10,883	11,246
7	-165	-38	7	-64	-107	-118	-131	-146	-160	-175	-189	-203	-217	-229	-238
8	-220	-50	9	376	631	694	774	859	943	1,028	1,113	1,198	1,277	1,352	1,399
9	-267	-60	11	21	36	39	44	49	53	58	63	68	72	77	79
10	-195	-44	8	305	512	563	629	697	765	834	903	972	1,036	1,097	1,135
11	-10,196	-2,312	415	2,663	4,463	4,913	5,475	6,075	6,675	7,275	7,875	8,475	9,038	9,563	9,900
12	121	27	-5	440	738	812	905	1,004	1,104	1,203	1,302	1,401	1,494	1,581	1,637
13	-195	-44	8	71	119	131	146	162	178	194	210	226	241	255	264
14	-296	-67	12	107	179	197	219	243	267	291	315	339	362	383	396
15	-1,121	-254	45	-170	-286	-314	-350	-389	-427	-466	-504	-542	-578	-612	-634
ALBERTA	-24,700	-5,600	1,000	7,100	11,900	13,100	14,600	16,200	17,800	19,400	21,000	22,600	24,100	25,500	26,400

NOTE: 1. DATA MAY NOT ADD TO PROVINCIAL TOTALS DUE TO ROUNDING.
2. YEAR HEADING REFERS TO THE TWELVE MONTH PERIOD ENDING MAY 31 OF THE SPECIFIED YEAR.

PREPARED BY ALBERTA BUREAU OF STATISTICS

SEPTEMBER, 1984

TABLE 7
PROJECTED DISTRIBUTION OF MIGRANTS FOR ALBERTA CENSUS DIVISIONS
1983-86 AND 1986-98

(IN PERCENT)

Census Division	1983 - 1986[1]	1986 - 1998
1	1.79	2.60
2	1.80	2.60
3	.75	.20
4	.13	-.83
5	.56	.00
6	44.22	42.60
7	.67	-.87
8	.89	5.30
9	1.08	.32
10	.79	4.30
11	41.28	37.45
12	-.49	6.20
13	.79	1.02
14	1.20	1.51
15	4.54	-2.40
Alberta	100.00	100.00

Note: [1] Since net migration is assumed to be negative at the provincial level, this distribution actually shows the distribution of migration loss for all CDs except CD 12.

Prepared by Alberta Bureau of Statistics September 1984

GLOSSARY

age-specific fertility rate - the number of births per 1,000 women of a specific age group within the child bearing age range (age 15-49).

cohort - a group of persons born in a specified year or period.

fertility - the contribution of births to population change.

life table - a table of statistics showing the probability of death at each age, the probability of survival to the next age, and other related mortality indicators for a stated population.

life table survival ratios - ratios calculated from the life table, representing the probability of survival from one age group to another.

migration - a permanent change of residence from one geographical unit to another.

mortality - the contribution of deaths to population change.

natural increase - the net contribution of births and deaths to population change.

net migration - the difference between in-migration (including immigration) and out-migration (including emigration) for a geographical unit.

population growth rate - population growth occurring in a certain period/year divided by the base population at the beginning of that period/year.

projection - a figure for a future date derived from carrying forward assumed trends, which are specifically defined.

total fertility rate - the sum total of age-specific fertility rates.

POOR

QUALITY

ORIGINAL